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PAPERS

FOURTH NEW ENGLAND REGIONAL COST CONFERENCE

Fundamentals of Business Management—Sales
F. L. Sweetser, Dutchess Mfg. Co.

Reduction of the Cost of Sales
C. E. Shaw, Dennison Mfg. Co.

Fundamentals of Business Management—Finance
W. S. Kemp, The Holtzer Cabot Electric Co.

THE NEW OCEAN HOUSE
Swampscott, Mass.
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BUSH TERMINAL BUILDING
130 WEST 42nd STREET, NEW YORK CITY

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FOURTH NEW ENGLAND REGIONAL COST CONFERENCE

Note—This publication contains three papers presented at the Fourth New England Regional Cost Conference of the N. A. C. A. held in The New Ocean House, Swampscott, Mass., on October 5 and 6, 1923. The general subject discussed at the Conference was "Fundamentals of Business Management." Three aspects of this question—sales, manufacturing and finance—were treated at the various sessions of the Conference.

The first paper, "Fundamentals of Business Management—Sales," was presented by Frank L. Sweetser, General Manager, Dutchess Manufacturing Co., Poughkeepsie, N. Y.; the second, "Reduction of the Cost of Sales," by C. E. Shaw, Dennison Manufacturing Co., Framingham, Mass.; and the third, "Fundamentals of Business Management—Finance," by W. S. Kemp, Treasurer, The Holtzer-Cabot Electric Co., Boston.

FUNDAMENTALS OF BUSINESS MANAGEMENT—SALES

FRANK L. SWEETSER

General Manager, Dutchess Manufacturing Co., Poughkeepsie, N. Y.

A famous old recipe in telling how to cook a rabbit says, "First, you must catch your rabbit." Sales usually cannot be made without salesmen. Since I hold to the belief in common with many leading thinkers in industry that the human element is all important, I am justified in starting with the most human of all elements —the salesman.

TRAINING OF SALESMEN

Sales are based wholly upon confidence between the seller and his customer. The mediator is the salesman, and I wonder if you agree with me that the prime essential is that the salesman must have confidence in the goods he sells as against confidence in himself and in the house. He must really believe that what he offers is worthy.

Such confidence cannot be gained by a few parrot-like phrases gleaned from a hasty talk with the sales manager or in any haphazard way; there must be a thorough knowledge of the product taught from such sources as the house can muster and should include a knowledge of the producers, quantities, quality and deliveries of raw materials, the manufacturing operations, working

conditions and methods in the factory, the plan and expenses of distribution, the results in other territories and a definite and enthusiastic acceptance of the general and specific sales plans. The salesman must be sold on the product and policies of his house.

Any sales plan is of tremendously greater value if it is the result of mutual planning. If I were responsible for a sales campaign, I would choose no plan at all combined with the right kind of salesmen rather than the most perfect plan coupled with the wrong kind of salesmen. All plans fail and fall without *human* help. "Workers together" is Biblical for coöperation.

Why not ask your salesman to submit his basis for selling your product? Give salesmen no hints and ten of them will give ten different answers. (If you can get any response the first time, you do well.)

Salesmen are not thinkers; they are practical psychologists. They think in terms of convenience; but if you can get them started analyzing, two good things will result: The man himself will develop, and you will secure his practical knowledge to add to your scientific methods.

A salesman who has confidence in his goods, but is of only medium education, presence and ability, is a better bet than the more showy one without faith.

Our respected fellow-member and friend, J. Lee Nicholson, in his recent work, "Profitable Management," says:

"The acme of success depends upon the proper coördination of many factors, the human factor being one of chief importance and the most difficult to harmonize and adjust. From top to bottom of the industrial mechanism, the frailities and peculiarities, the necessities and prejudices of the human element are continually encountered, developing friction and causing unexpected and troublesome complexities. Every machine in the factory, every part of the product, every sale, every dollar invested, depends for its efficiency on man."

Back of the sales organization in the field we must have in the home office a human sales manager and a human sales engineering department. We must have a plan, and prompt, accurate records, remembering always to "man the plan."

Sales Territories and Valuation

Assuming a manufacturing business in the men's clothing industry, with the United States as its territory, as an example, I believe that the country should be divided, first, into districts, perhaps five in number, with five district supervisors in charge—New England, Atlantic, Southern, Mid-Western and Pacific; that salesmen should be assigned under these supervisors, following state lines as nearly as possible, but with the county as the unit. For a line of goods such as I have in mind, forty to sixty salesmen would be required. The size of each territory would be dependent upon the several factors of population, size of cities and

towns, their purchasing power and character of the activities in the counties, as well as the consideration given to the available man power.

Today, with the wealth of material available, the sales engineering department may with comparative ease set a sales value upon any county in the United States for any product which they may have to sell. Not only are reports available from manufacturers' associations in all lines, from the United States Chamber of Commerce, from a study of the history of past transactions of a particular concern and other concerns in the industry, but the Government through its Department of Commerce, under the able leadership of Herbert Hoover, is publishing data of great value. In our own business, the manufacture of separate trousers, we are receiving from the Government, monthly, a report of the quantity of separate trousers produced by 531 manufacturing establishments. The task of determining the distribution of this total quantity (which is somewhat analyzed as to grades) into counties of the United States is easy, using the factors of male population, income, crops, wage earners, together with any arbitrary factors which it may be desirable to introduce; for example, the total quantity of garments reported monthly is approximately 1,500,000. We know the average wholesale price of trousers in the various grades. Assuming the individual manufacturer's scheduled production monthly to be 100,000, the complete analyzed quota may be worked out. Perhaps the most simple basis is that set forth in a recent publication by the Babson organization, which converts all of the factors to the dollars and cents basis, and uses a weighted average of all factors selected to determine the quota for each territory.

Sales Budget (Quotas)

The question of whether the factory dog should wag the sales department tail or vice versa has been much discussed. In a seasonal business such as ours the year should be recognized as consisting of two seasons—spring and fall, each of six months' duration, and that there should be a budgeting committee consisting of representatives from the departments of sales, production and administration. The budgeting committee should call for reports and estimates from each of these divisions at least two months in advance before the beginning of each season. The committee should proceed to set up, first, the normal maximum capacity of the plant, forecasting any additions or improvements which are calculated to increase the output.

Next, a schedule of reasonable sales possibilities should be determined upon and a complete record made of the capacity figures, as well as a record of the schedule of sales figures covering all factory operations and departments, and all sales territories. These figures should indicate dollars and cents valuations, as well as unit quantities.

The manufacturing and distribution costs should be presented to the budgeting committee based on definite standards for materials, direct labor and overhead. The overhead, or burden, should be figured at capacity, so that the costs will reflect the lowest possible total price at which business may be accepted. Any losses or gains arising from the difference between the actual cost of operations and scheduled budget, as well as those between the actual cost and capacity budget, serve as a barometer for the guidance of the budgeting committee and the executives.

Budgeting is commonly visualized as a vast accumulation of figures, a set of tables or charts, but I wish to call your attention to the fact that fundamentally budgeting is primarily a point of view. The important thing is to fix the attention of the executives upon the highest possible goal to be achieved instead of viewing the future solely in the light of the past.

When the budgeting committee has agreed upon a complete schedule of factory operations for the season of six months, and has planned the purchasing and handling of materials, the assurance of a working force of operators and salesmen, and has agreed on the means of financing, the quotas should be assigned to factory departments, sales districts and territories.

Sales Expenses

We must assume that there is in operation a complete standard cost accounting system embracing not only the cost of manufacture by operating departments, but also the cost of distribution by departments.

The records should be complete, analytical and on a monthly basis, not only for the actual expenditures, but should provide a means of comparison with the budgeted allowances established by the budgeting committee. In our industry we find it possible by analysis to assess the cost of distribution in three ways: (1) Expenses incident to the quantity shipped, assessed on a per unit basis, (2) expenses incident to the selling price of shipments assessed on a percentage basis and (3) expenses arising from special sales either to large customers using a volume of product or from sales of special products. Each class absorbs its own expense based on its own costs for expenses.

We consider the following items of expense arising after the completion of the product to be proper items of distribution costs: Finished stock department, packing and shipping department, administrative office, branch office fixed charges, general selling expenses and general administrative expenses, all of which are assessed on the unit basis.

Advertising, salesmen's commissions, salaries and expenses, customers' deductions and certain other arbitrary items are figured on a percentage basis.

The budgeting committee should establish a definite standard distribution cost charge for each product whatever the basis of assessment may be.

The analysis of product and a monthly report of gross margins, distribution costs and net profits or losses by grades and varieties of products, as well as by territories, is accomplished by use of punched card tabulating machines.

We find it convenient to place each salesman on a petty cash imprest system with weekly reports on specially prepared vouchers, which are entered into our accounts payable distribution and paid by check the same as any other invoice. Salesmen traveling by automobile are allowed a fixed mileage charge, based on the miles traveled.

REDUCTION OF THE COST OF SALES

C. E. SHAW

Dennison Manufacturing Company, Framingham, Mass.

The Sales Division of the Dennison Manufacturing Company has during the past two years devoted a great deal of time to the problem of reducing the cost of distribution of our merchandise. While obviously one method of obtaining a reduction would be to eliminate or reduce actual expenditures, such a course might naturally defeat its own purpose in the long run by reducing sales. A sounder method is to determine whether or not the yield in sales results can be increased for every dollar of expenditure.

The first step along these lines was to analyze the cost of the canvass itself. On the basis of time studies taken on several salesmen late in the fall of 1920 and the spring of 1921, we determined that the actual time spent by our average salesman in the presence of the customer was about 15 per cent of his total working time. In other words, out of an eight-hour day our salesman actually spent in the presence of the customer, on the average, one hour and twelve minutes. The balance of the time was spent as follows: Travelling, 40 per cent; waiting, 20 per cent; clerical and other miscellaneous work, 25 per cent. It was evident, therefore, that if the percentage of time devoted to non-selling work could be reduced and added to the time spent in actual selling we ought to get a better yield of sales for the same time spent in canvass.

A start was made in 1921 along experimental lines to determine to what degree non-selling work could be reduced and actual selling time increased. Two selling fields were selected as experimental fields in which to carry on this work. These were a city and a typical country district using traveling salesmen only.

Traveling time, representing 40 per cent of the total, offered the best opportunity for making savings, as it represented more time than any other non-selling factor. In our experiments to determine just how this time could be reduced and the time gained added to the actual selling time, a study showed that salesmen are prone to canvass unsystematically, both in respect to the ter-

ritory they covered and the times at which they called on their prospects and customers. The guiding principle seemed to be a "hunch" that there might be an order in a certain place, and as a result they passed up calls on the way to call upon the "hunch." If, therefore, a salesman's work could be planned or scheduled so as to make as few jumps as possible, and also call only in those places where presumably the time of purchase was near at hand, the 40 per cent devoted to traveling would necessarily be reduced, and chances of securing an order increased.

Before such a plan could be worked out satisfactorily, however, it became evident that we must have more definite information as to who and where our prospects were and what were the logical times or seasons for them to purchase. The next step taken, therefore, was to list all the prospects and customers in the city, and to bring up to date the records of sales and lost orders. At the same time, in order to insure the continuance of accurate records, it became necessary to ask the salesmen to make a report on each call, so that there might be available a record of the items which the customer or prospect used whether sold by us or not, and the time at which he would be in the market.

When the records were completed, the cards were filed geographically, that is, by streets, so that in the case of prospects a salesman could be given each day a certain number of calls to make, arranged in such a way that he would cover the least possible distance in making the calls. In the case of customers, he could be given each day a list of accounts or prospects who were in the market approximately on this day and these also would be arranged so as to represent the least possible distance to travel. A duplicate set of records by trades also enabled us to analyze sales by trades and route men by trades, wherever this type of canvass was necessary.

Another big part of non-selling time was that of clerical work, which consisted of making all reports, records, writing of orders and other details which every salesman has had to do. Here again it was seen that if any part could be transferred from the salesman to a clerk we could presumably increase the time for actual selling. In the two experimental districts of which we have spoken arrangements were made for clerks to keep all sales records formerly kept by salesmen. In addition, clerks under the direction of the District Manager prepare record cards and report slips for salesmen daily and also try to give each salesman the samples which he will need to use in calling on each customer or prospect.

A check-up made about a year after the introduction of this application of planning to the salesmen's work indicates that we can increase the time that the salesman devotes to actual selling from an average of 15 per cent to more nearly an average of 25 to 30 per cent, by a reduction in time spent for traveling and on records and office routine.

But, like all progress made in human affairs, savings are not effected without some expenditure. If we are to save by planning so that the salesman's daily work will be more effective, our experiments demonstrated that we must spend something for better records and information on which to base the planning. Just what the net savings will be we cannot as yet predict.

While much thought has been given to the problem of reducing the non-selling time and increasing the actual selling time, the other phase of the problem, that of making more effective the time spent in the presence of the customer, has not been neglected.

Mention has already been made of the importance of calling on a prospect or customer at the time he should be ready to buy. While this can be controlled in part by sales records showing the date on which the customer will probably buy, they will not be of any assistance in the case of large numbers of prospects who have never been canvassed. A study has been made, therefore, to determine the periods of peak activity in each trade or industry, and a buying time set for each trade, sufficiently far in advance of its peak season to enable us to canvass them properly and at the same time have sufficient time to manufacture the merchandise according to our shipping schedules. For example, the peak season for creameries and ice cream manufacturers is from April to November. Therefore we should canvass these trades and try to secure their orders during the first three months of the year.

Another way of increasing the effectiveness of the actual selling time is to enable the salesman to sell at one time all the items which a customer might buy during a period of time. We immediately found it necessary to make an intensive study of each trade and business which our salesmen are supposed to canvass, and to determine what the items are which each trade uses, together with the methods and the reasons why they are used. This information is being compiled in the form of special sales information for each trade, so that the salesman may be able to cover all possible items which each customer uses in a single call.

In our efforts to make more effective the actual time spent in the presence of the customer, the ability of the salesman himself naturally comes under consideration, and brings us to the problem of training and education. A study of our past methods of training salesmen very quickly showed us that we were still following the old "sink or swim" method of sending men out to sell who were not sufficiently educated and trained. In the last analysis, of course, it is the job of a District Sales Manager to train and educate his men. Our efforts, therefore, were directed to the discovery of ways and means to help him do this work more effectively and easily than in the past.

Manuals for the education and training of new men and the up-grading of older salesmen have been prepared covering all the information which a successful Dennison salesman should have. With this material and a systematic plan for using the material

in the training of his men, the District Manager should be able to make sure that each salesman is qualified to make the best use of his selling time.

In closing I wish to emphasize again the point made by Mr. Sweetser in his paper that there is great need in all work of this kind of taking into consideration the human factor represented by those upon whom all plans are tried. It is our belief, based upon considerable experience, that no matter how well a plan, system or method is drawn up, whether dealing with production problems or selling, success can be obtained only in proportion to the amount of sincere and whole-hearted coöperation given by the men whom the plan or system affects. For this reason we admit frankly that we are prone to go slow in the introduction of any new methods, deliberately spending more time and energy in the education of all concerned than in the installation and operation of the plan. We know that in the long run the end is attained more quickly by making haste slowly.

I think it is particularly necessary that any of us who are engaged in research work, whether it be in cost accounting lines, production or sales, have a very definite responsibility in making sure that those who are affected by our work have every opportunity to understand and be "sold" on what we are trying to do.

FUNDAMENTALS OF BUSINESS MANAGEMENT — Finance

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The Holtzer-Cabot Electric Company, Boston, Mass.

The history of the past is that the efforts of man have culminated at different times in different directions, giving us "the age of art," "the age of music," "the age of literature," and so on. I think we can safely say that the result of efforts of the present time will go down in history as the "age of industry."

It would be interesting to review the industrial conditions as they existed one hundred years or even fifty years ago, but they are too well known to you for me to take the time to review them now. There are, however, points that I would like to emphasize; namely, that in those earlier days there was practically no machinery, no large aggregations of capital, and all production and distribution was carried on by small units operating within a limited area. Under such conditions the proprietors were able to personally supervise all branches of the business and simple methods of bookkeeping recorded all the facts necessary. There was very little accounting of costs.

The discovery of steam and electrical power introduced machine production and changed the functional character of our "industrial organisms." Among the many changes which immediately took place were the increase in size of the units of capital investments in manufacturing plants and equipment and cost account-

ing became necessary. As long as production and distribution were largely a labor cost, accounting was simple and competition not an important factor. The moment, however, that hand labor was superseded to a degree by machine production, all of the elements of modern accounting, including cost accounting, became involved. The changes which took place in production methods under machine production had a widespread influence, even to the breaking down of barriers between nations, and one of the effects of which was soon reflected in the growth of a complex international monetary system and credit structure. The whole industrial movements from that time on had to be regarded from the financial point of view.

The term "finance" is a very broad subject and I shall of necessity confine myself to a very limited discussion of this subject which will be along those lines on which finance applies to modern industry.

Today everybody knows that it requires capital to acquire land, to build factories, to buy machinery, to purchase materials for manufacture and to pay labor for producing the goods manufactured.

Everybody knows further that it requires capital to advertise, to sell and to distribute the goods produced and used by modernly civilized peoples.

Working Capital

What many people, and perhaps I might say most people, do not understand is that in every successful business there must be a certain amount of capital invested and tied up for a longer or shorter time in what is commonly called "working capital."

I believe the commonly accepted definition of "working capital" has been that it is the "excess of current assets over current liabilities."

Professor McKinsey, co-author of the book on "Controlling the Finances of a Business," says: "It seems more logical to use the new definition, *i.e.*, that the working capital of a business is its current assets."

Regardless of how we define "working capital," the point I have in mind is that there must be, in every well-managed business, a certain amount of capital in such form that it may be available for the immediate liquidation of any liability when due.

Bradstreet reports show that a very large percentage of business failures are due to insufficient working capital.

As most of you present here today are accountants and not bankers or financiers, I am going to take just a moment to enlarge on this matter of working capital and to call your attention to the principal forms of securities which represent the working and other capital which is invested in a corporation; namely, common shares of capital stock, preferred shares of capital stock and bonds. As a general statement, investment in this form of

securities furnishes the capital in a business. All business men know that the amount of business transacted fluctuates from time to time and that more capital is required at one time than at another. Some lines of business are seasonable and require more capital for several months of the year than for other months. Now, if sufficient capital is put into the business to provide for its maximum requirements, for plant and equipment and for maximum requirements for materials and payrolls, etc., it is plain to see that at other times there will be an excess of capital which must remain idle or be invested outside of the business. That would be one extreme. The other extreme would be to have only a minimum of capital and to borrow the balance on short-time securities, usually in the form of notes or commercial paper. Such notes usually mature in three, four or six months from date and are classed among the current liabilities. Unless the current or quick assets are of such a character and well in excess of the current liabilities, it is easy to forecast the outcome in case of a serious business depression, shrinkage in values or tight money markets, etc. Such a condition was well exemplified in 1920, when as you all know there was a sudden depression in business combined with a serious reduction in values. Deliveries of material were refused, and contracts repudiated, resulting in numerous failures. An excessive amount of capital is costly, while an insufficient amount will hamper a business and may bring disaster.

Next in the development of the financial plan of the business comes the consideration of how much of our capital shall be put into the working assets of our business, for material, for labor and for expenses, and how much shall be put into the fixed assets of plant, machinery and fixtures. There is no fixed rule for determining just how much fixed and how much working capital there should be in any particular business. It is obvious, however, that some kinds of business require a greater ratio of working capital than others. Experience and good management best determine the proper amount in any particular business or kind of business. One test of good management, scientific or otherwise, is shown in its ability to forecast the financial requirements of a business and to provide in due time the funds to promptly meet all financial obligations as they mature.

Budgetary Control

In order to safeguard the invested capital, avoid financial embarrassment and to operate with a profit, the management must, under business conditions as they exist today in the larger organizations, visualize the future, forecast future demands, and be prepared in every way to meet future conditions. Out of this necessity has been developed a very useful something called "budgetary control." Budgetary control is comparatively a new term in business accounting and, while a control of some kind has more or less often existed to a certain extent, it is only within

the last few years that budgetary control has been applied scientifically to nearly all lines of business. In fact, until accounting had advanced to a certain point it was impossible to establish budgetary control as now used.

Let us now assume, for the purpose of discussion, that with or without the assistance of budgetary control the requirements for fixed and working capital have been worked out and that the necessary funds have been provided in a business corporation, manufacturing, selling and distributing several lines of product.

The question then arises as to what accounts should control the investments made and the activities of the business in general.

Financial Department

Let us first consider the matter from the financial viewpoint. Financing is largely controlled from one office or department, but in its control the financial department or financial officer necessarily extends his influence through every department of the business from the moment capital is considered and particularly from the moment capital is disbursed for the purchase of real estate, machinery, materials, supplies, labor, sales expenses, etc., on through the granting of credit to the purchaser of the finished product. The financial department or officer thus becomes the custodian or trustee of all the assets of the corporation and as such should be held responsible not merely for a strict accounting of all real and personal property, but for an accounting of a reasonable income on all of capital invested.

Now, with regard to an accounting for a reasonable income on all of the capital invested, it is to be noted that the types or classes of assets essential to a business as a whole vary as to kind, and each kind of asset must earn its keep. Certain fixed assets, due to their permanency, are not expected to produce the same rate of income as certain current assets. It therefore seems most desirable, from a management point of view, to establish a minimum rate of income which must be derived from all assets and to then arrange our accounting so as to show departmentally all other gains and losses as a separate amount. In other words, for management purposes gain or loss from operations may be accumulated in two sections.

If this viewpoint is accepted—and it is logical—the next step would be to allocate by inventory all assets to each and every department and to set up proper controlling accounts for each class of assets. We thus establish a most scientific basis for determining the minimum income from each operating section of the business, as well as for determining the estimated expense of each.

After an experience of eight years in the use of such a method, I present it for the consideration of this Society of Cost Accountants and for discussion. Time will not permit me to explain the many advantages I have found in this method, both as a bank man and

as treasurer of a corporation. The principle, however, of requiring every department to pay a reasonable rate of income on the value, at cost, of all assets used by it is sound and incidentally and automatically prevents unwarranted expansion and the consequent increased investment on which a profit must be made. This plan of running the finances of a corporation keeps the expenses down to the minimum, assuring the rate of income demanded by the financial department. Department heads soon become keen to effect as large a turnover as possible on the investment in their departments.

In establishing a department which I call the "Financial Department," which cares for the accounting purposes of all of the assets of a corporation, we present a monthly balance sheet of all departments. The total assets and liabilities of the corporation are shown as usual, the sum of the departmental figures agree with those shown on the general balance sheet. The detail of departmental accounts is, however, quite different and shows the amount of capital invested in each branch of the business. That is to say, there is a controlling account for each factory and one for each sales office or branch. Detailed subsidiary accounts are kept, as may be necessary or deemed advisable for each branch or department, and these reconcile with the controlilng accounts of the financial department. The results of the accounting department under this method are shown on the following monthly statements:

1. "Condensed General Balance Sheet of Assets and Liabilities"
2. "Balance Sheet—Financial Department"—Controlling Account
3. "Balance Sheet for each Branch or Department for which the Financial Department carries a Controlling Account"
4. "Income and Expense Account—Financial Department"
5. "Trading and Profit and Loss Account for each Sales Department"
6. "Loss or Gain Statement for each Factory"—all working on the plan of Budgetary Control

General Balance Sheet

The general balance sheet is as usual the basis for new financing and all credit purposes.

No discussion will be given the subjects of cash, notes, accounts receivable and other negotiable securities, as you are all familiar with current practice of long standing on those items.

We will, therefore, first take up the item of merchandise inventory.

Merchandise Inventory

This asset of merchandise inventory is in most lines of manufacturing business the largest single item among the current assets and is the one about which so little definite knowledge is to be had that bankers and credit men usually figure it at 50 cents

or less on the dollar. Need this be so? Of course, the liquidating value of a merchandise inventory depends largely on the kind of business and the form in which the merchandise exists, and on the market at the time of liquidation. Its value further depends on whether it is in raw materials, work in process, finished parts, or completely finished goods, and whether or not the finished product is standard or special.

In the first place, the amount of merchandise inventory should be supported by departmental inventory records. This should be done for both financial purposes and for management purposes. Whether or not the individual stock records are carried in quantities or in money value will depend upon conditions and the kind of business, but all transfers to and from each store or department should be made in money value. On what basis these inventory values should be established and carried in the financial accounts is, I believe, one of the most important questions confronting all interested parties; namely, cost accountants, public accountants who certify balance sheets, credit men, bankers, officers of corporations, stockholders and finally the state and federal tax departments.

Now as to the basis on which we should value our merchandise inventory, personally I feel that we are fast getting away from the old idea of actual individual costs. We all know that the cost of a particular article made at different times varies greatly. At one time the material may work hard, the labor thereon may be inefficient, the machine equipment may be in poor condition, and so on, resulting in an actual isolated cost far in excess of even its market value. Under such conditions, what justification is there for charging the finished article into merchandise inventory at its actual cost? Again there are periods of depression, when, if all overhead expenses are charged into cost of *current* production, the actual cost will be far in excess of market value. Please note carefully that I stipulate cost of *current* production. These conditions have recently led to the serious consideration of "normal costs."

I quote the following from the Fourth Edition of "Standard Accounting and Cost System for the Electrical Industry," with which I am in complete accord:

"Indirect manufacturing expenses do not fluctuate in parallel with the volume of production." Get that! "Therefore, costs obtained by using a temporarily high or low percentage or machine hour rate (because production for the periods upon which they are based is subnormal or abnormal) are not true costs, as applied to most lines of production.

"The fiscal year is largely an arbitrary period and may not represent average conditions. Consequently the attempt to absorb the indirect expenses in the costs of the fiscal period in which they are incurred may work injustice or entail loss. It is, therefore, sound accounting and good financial policy to recognize, in deter-

mining the cost of production, the principle of the continuity of time."

No one, I am sure, will deny the soundness of the financial policy in showing all merchandise inventories in the balance sheet at prices representing "cost or market, whichever is lower." Such a policy, however, does not prevent us from carrying such inventories in stores, for accounting and sales purposes, at a more correct and different value so long as we properly account for the difference in reserve accounts or otherwise.

In brief, then, our perpetual inventory records should be on the basis of normal costs—no question about that—and in support of such normal costs there should be the facts and figures which reflect actual costs with the proper adjustments made and reserve accounts established for the differences between actual isolated costs and the normal costs. The above applies to raw materials, finished parts, work in process and finished stock.

On this basis I have demonstrated in practice that merchandise inventories are acceptable in a going concern at the values stated and are subject only to such shrinkage in case of liquidation as would naturally occur under a forced sale.

Perpetual inventories are not only necessary for proper financial control, but are absolutely essential as a basis for production in order to meet the demands of the sales departments and the factory schedules.

Plant Account

The plant account in the past has without question been "juggled" more than any other asset item. The manner in which it is treated in computing costs of production has a very decided effect upon earnings as reflected in the profit and loss and in the surplus accounts of corporations.

If the federal tax laws enacted during the war had no other good features, they did bring about a more sane and uniform treatment of this asset item. Today there is absolutely no excuse for any corporation not maintaining a complete property record of all its equipment, properly classified with relation to its rate of depreciation and showing its original cost, depreciation and net value. And do not overlook to include freight and setting-up-cost in the "original cost" figure.

All equipment should be recorded departmentally, so that all expenses relating thereto may be obtained departmentally for management and cost purposes and for reference in the event of fire loss adjustmnt, as well as for departmental financial statements. Additions made thereto should be recorded and shown in the asset account monthly and all depreciation and other expenses on this class of assets should be promptly charged into the overhead expense.

Monthly Statements

The practice of taking a physically tested inventory, closing the books and drawing off a gain or loss statement only once a

year is no longer approved from any point of view. Present-day financing and modern accounting demand monthly statements in practically all lines of business, and in some lines weekly and daily statements, as, for example, chain stores and those dealing with such staples as cotton, wool, leather, etc., in bulk.

To obtain true earnings for these short periods, it is necessary to include as expense credits, items of expenses paid in advance, such as interest, taxes, insurance, etc. These, as you all know, are properly cared for in an account called "deferred charges," the amount of which is pro-rated over the period for which they have been paid. Likewise it is necessary to accrue known anticipated expenses and to pro-rate them in the same manner.

So much for the principal assets shown on the balance sheet.

As to liabilities—aside from the usual liabilities shown as notes payable and accounts payable—there is in most lines of business a very important liability which is seldom shown on the balance sheet, and which, I fear, in many cases is not known or fully appreciated by the management. I refer to "commitments."

Practically every concern that carries on a trading or manufacturing business must place for future delivery signed orders for a certain portion of its product. In general practice no part of this liability is shown in the books of account until an invoice has been received and approved. No one can deny, however, that a real or contingent liability was created the moment the original contract or purchase order was issued.

All purchase orders should specify delivery date and when large amounts are involved should be issued only after receiving specific quotations. Under such conditions it is not difficult to establish the amount of this liability and when it will become payable, which is essential knowledge for the economic conduct of the financial department.

Where sales quotas and factory schedules are well established there need be no over-buying and this liability should not exceed the necessary requirements of the business. Furthermore, a proper coördination of the sales, production and financial program will make it possible to foresee the financial requirements and to restrict the whole program, if necessary, in order to keep it within the sound financial strength of the concern.

Income and Expense Account—Financial Department

Let us now briefly consider the statement of income and expenses. If the cost accounting system provides for accumulation in the financial department of a fixed return on the various assets of the corporation as is contemplated, then income and expense accounts of the financial department follow. The income and expense accounts of the financial department are:

a. Net income from investment in land buildings occupied by departments.

This income is on the basis of a proper rental for similar property and is charged to each branch and department for the use of the property occupied.

From the gross revenue so received is paid the cost of insurance, taxes, repairs and depreciation.

b. Net income from investment in machinery and fixtures in the departments.

This income compensates the financial department for the use of this class of equipment.

From the gross revenue so received is deducted the cost of insurance, taxes and depreciation.

c. Interest on investment in current assets in each department.

This is charged to branches and departments on basis of their inventory balances at month ends and compensates the financial department for the use of its money tied up in working capital.

d. Other income.

Other income shown in this statement consists of discount on purchases, interest on deposits, interest on notes receivable, income from outside investments, gain on sale of capital assets and sundry items, all of which are financial profits or losses, as the case may be.

e. Other expenses.

Interest paid.

Auditing and tax service.

General financial department salaries.

Capital stock tax.

Expenses in connection with various stock and bond issues, such as registrar fees, transfer agent fees, etc.

Expenses in connection with idle property.

Donations and miscellaneous expenses.

Statement of Trading and Profit and Loss Account of Sales Departments

This statement shows gross sales billed, from which is deducted cash discounts and any other allowances, leaving the sales *net*. From the net sales is deducted the cost of sales, leaving gross margin. The term "gross margin" has been substituted for "gross profit" advisedly, as it is agreed that there can be only one *profit;* namely, "net profit."

A carefully classified set of sales and distribution expense accounts is kept, the total of which deducted from the gross margin shows the net income or profit, or loss, as the case may be, of each sales department. If a single sales department handles more than one line of product, it is desirable to classify the sales and the selling expenses so as to obtain the net profit, or loss if any, on each line of product sold.

With a reasonable number of statistical records and with experience in a stable line of business, it is a simple matter to

establish sales quotas, sales expenses and net profits, and with these three factors well established it becomes an easy matter to anticipate and make the proper financial arrangements for the business, all of which is business management of the highest practical refinement.

Factory Gain or Loss Statement

We now have one more statement which is necessary in order to tie our factory operations completely in with our general statement of profit and loss. This statement is the factory adjustment or factory gain or loss statement.

Through the use of "normals" and "averages" in the costing of product, standard values are being more and more established for accounting purposes. This is especially true where the conditions surrounding the product require that the sales price be fixed before the goods are completely manufactured.

It must be understood that whenever normals or standard values are used in accounting some kind of actual costs must also be maintained in order to effect proper adjustment between normals and actuals over a period of time whenever such adjustments are necessary. If, for instance, raw materials are taken into cost of product at some value other than their actual cost at particular time, a difference will result which must be adjusted. The same applies to labor, expended more or less than normals.

If all such adjustments are taken monthly on commodities and the perpetual inventories carefully maintained, there is no serious difference at any time between the book inventory and the physical inventory and sales are taken at a figure of known profit.

For an elaboration of financial statistics and forms I refer those who may be interested in my views to some talks which I gave last winter before the Boston Chapter of the National Association of Cost Accountants and which have since been published by our National Association in a book, "Departmental and Standard Costs."

For lack of time I have not pointed out as I went along the important relationship of my subject to the subject of sales and production so ably presented and discussed at our morning session. I feel sure, however, no one will fail to appreciate that all three must function and synchronize in every respect in order to produce the best efficiency, the quickest turnover and the greatest amount of profit.